

**UNITED STATES PATENT APPLICATION**  
**OF**  
**Robert Stevens**  
**FOR**  
**A SYSTEM AND METHOD FOR CREATING A SPOT MARKET**

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## **A System and Method For Creating a Spot Market**

### **FIELD OF THE INVENTION**

The present invention relates to a system and method for conducting electronic  
5 auctions, and more particularly, to a system and method for creating a spot market over a  
computer network.

### **BACKGROUND OF THE INVENTION**

Advances in computer processing power and network communications have made  
10 information from a wide variety of sources available to users on computer networks.  
Computer networking allows network computer users to share information, software  
applications and hardware devices and internetworking enables a set of physical networks  
to be connected into a single network such as the Internet. Today, computers connected  
to the Internet have almost instant access to information stored in relatively distant  
15 regions. Moreover, computers connected to networks other than the Internet also have  
access to information stored on those networks. The World Wide Web (Web), a  
hypermedia system used on the Internet, enables hypertext linking, whereby documents  
automatically reference or link other documents located on connected computer networks  
around the world. Thus, users connected to the Internet have almost instant access to  
20 information stored in relatively distant regions. Currently, Internet users retrieve  
information from the Internet, through the Web, by 'visiting' a web site on a computer  
that is connected to the Internet.

The web site is, in general terms, an application that displays information stored on a network computer. The web site accepts connections from programs, such as Internet browser applications. Browser applications, such as Microsoft Explorer™ or Netscape Internet Browser™, allow Internet users to access information displayed on the web site.

As the number of physical networks connected to the Internet continues to grow, so too will the number of web sites that are accessible to Internet users and so too will commercial activity on the Internet. Providers of a wide range of products and/or services are continuously exploring new methods for using the Internet to accomplish business goals. Some companies use the Internet to purchase products through on-line auctions.

However, products, such as transportation and Maintenance, Repair and Operations (MRO) components, that generally require quick turnaround times cannot be purchased through on-line auctions since there is insufficient time to alert suppliers about the auction and for the suppliers to place their bids.

Most large companies have employees or expeditors that make unplanned / “spot” buys on a regular basis as necessary for a company’s business. These spot buys are specifically purchases that require relatively immediate delivery. For example a manager in a large company may receive a request for transportation for immediate delivery of products. Such requests may come at anytime of the day, although they usually occur in the afternoon. Traditionally, the manager fills the spot needs by having the expeditor contact suppliers that have existing contracts with the company, one at a time. As soon

as a supplier agrees to fill the need, the employee stops calling other suppliers. Since there is a preexisting contract between the supplier and the company, the employee usually follows up with the price at a later time. This method may take a lot of the expeditor's time based on the amount of spot needs that must be fulfilled. In addition, the company usually takes the first price that is quoted without taking the time to locate and compare different quotes. Thus, the company loses both time and money in these transactions.

Currently, there are companies that provide business-to-business procurement solutions, mostly through on-line exchanges or through software packages that integrate with existing desktop applications. One company offers a suite of bidding applications that can be used as standalones or integrated with major electronic procurement packages. These business-to-business procurement solutions handle complex procurement needs with extended bidding times. What is needed is a product that handles spot purchases with quick turnaround times.

#### **SUMMARY OF THE INVENTION**

The present invention is directed to a system and method for soliciting and receiving bids for goods or services necessary to satisfy a spot need of a buyer. Initially, the system receives a request to procure goods or services that are required to satisfy the spot need of the buyer. The request includes information identifying the type of goods or services being procured by the buyer. Next, the system automatically selects a group of potential bidders in response to the good or service identified in the request by querying a

database. The database includes a plurality of groups of potential bidders, wherein each of the groups of potential bidders is associated with purchasing requests directed to a particular good or service. The system then electronically notifies each of the potential bidders in the selected group of an opportunity to submit a bid to satisfy all or part of the buyer's purchase request. The system electronically accepts bids from each of the potential bidders in the selected group and selects a winning bidder in accordance with the received bids.

In accordance with one embodiment, the database also stores information about each supplier such as, for example, geographic areas where a given supplier may be capable of delivering given goods or services, as well as historical performance of the supplier in connection with one or more prior on-line auctions. The historical performance information may include, for example, the bidding pattern of a supplier during one or more prior auctions, as well as the historical ability of the supplier to deliver particular goods or services following previous auctions where the supplier was the winning bidder. In this embodiment, the spot request from the buyer may further include information identifying a geographic location associated with the goods or services being procured by the buyer. When such geographic information is included with the request, the system may automatically select the bidders to invite by querying the supplier database using both the type and geographic location information from the request.

Since the present invention is directed to meeting spot needs of buyers, the process of automatically selecting bidders for the auction, automatically inviting the

bidders to the auction, conducting the on-line auction and selecting a winning bidder are preferably completed either on the same business day that the request for procurement is received, or within 24 hours of receipt of the request.

The electronic communication used for inviting bidders to the auction may be sent to each of the selected bidders by, for example, posting a message on an electronic message board or sending an electronic mail message to each of the selected bidders.

It is the object of the present invention to offer buyers a low cost, high productivity spot market system, in a network environment, for making unplanned "spot" purchases that require quick turnaround times.

The spot market system of the present invention is optionally implemented as a portal that is accessible through an on-line marketplace. This enables the provider of the on-line marketplace to offer multiple products for servicing various clients' needs from one location. It also enables clients of the on-line marketplace to conduct business for themselves without paying for full services of a market making team.

Additional features and advantages of the invention will be set forth in the description that follows, and in part will be apparent from the description, or may be learned by practice of the invention. The objectives and advantages of the invention will be realized and attained by the system particularly pointed out in the written description and claims hereof as well as the appended drawings.

**BRIEF DESCRIPTION OF THE DRAWINGS**

The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this specification, illustrate embodiments of the invention that together with the description  
5 serve to explain the principles of the invention.

In the drawings:

Fig. 1 illustrates a computer network in which the inventive system may be incorporated;

Fig. 2 illustrates the TCP/IP Layering Model Protocol used during  
10 communications between components on the computer network;

Fig. 3 illustrates a web page that an expeditor uses to post load information on the spot market of the present invention;

Fig. 4 illustrates an e-mail message from the expeditor to a supplier inviting the supplier to participate in a spot auction;

15 Fig. 5 illustrates a web page in the spot marketplace where pre-selected suppliers place bids;

Fig. 6 illustrates a web page in the spot marketplace where an expeditor reviews bids placed by any of the pre-selected suppliers;

Fig. 7 illustrates an e-mail message from the expeditor to the winning supplier;

20 Fig. 8 illustrates a web page in the spot marketplace where the winning supplier confirms the award; and

Fig. 9 illustrates a method for implementing the present invention.

## **DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings. The present invention described below explains the functionality of the inventive system and method for using a computer network to address spot needs.

Fig. 1 is an example of a local area network (LAN) 100 that is configured to implement the inventive system. Note that while Fig.1 is directed to a local area network, it should also be apparent that other network topologies, such as Ethernet, may be used. LAN 100 comprises a server 102, four computer systems 104-110, and peripherals, such as printers and other devices 112, which may be shared by components on LAN 100. Computer systems 104-110 may serve as clients for server 102 and/or as clients and/or servers for each other and/or for other components connected to LAN 100. As would be obvious to those skilled in the art, other network configurations, such a peer-to-peer configuration, may be used. Components on LAN 100 are preferably connected together by cable media, for example copper or fiber-optic cable and the network topology may be a token ring topology 114. It should be apparent to those of ordinary skill in the art that other media, for example, wireless media, such as optical and radio frequency, may also connect LAN 100 components.

Data may be transferred between components on LAN 100 in packets, i.e., blocks of data that are individually transmitted over LAN 100. Routers 120, 122 create an



expanded network by connecting LAN 100 to other computer networks, such as the Internet, other LANs or Wide Area Networks (WAN). Routers are hardware devices that may include a conventional processor, memory, and separate I/O interface for each network to which it connects. Hence, components on the expanded network may share information and services with each other. In order for communications to occur between components of physically connected networks, all components on the expanded network and the routers that connect them must adhere to a standard protocol. Computer networks connected to the Internet and to other networks typically use TCP/IP Layering Model Protocol. It should be noted that other internetworking protocols may be used.

As illustrated in Fig. 2, TCP/IP Layering Model comprises an application layer (Layer 5) 202, a transport layer (Layer 4) 204, an Internet layer (Layer 3) 206, a network interface layer (Layer 2) 208, and a physical layer (Layer 1) 210. Application layer protocols 202 specify how each software application connected to the network uses the network. Transport layer protocols 204 specify how to ensure reliable transfer among complex protocols. Internet layer protocols 206 specify the format of packets sent across the network as well as mechanisms used to forward packets from a computer through one or more routers to a final destination. Network interface layer protocols 208 specify how to organize data into frames and how a computer transmits frames over the network.

Physical layer protocols 210 correspond to the basic network hardware. By using TCP/IP Layering model protocols, any component connected to the network can communicate with any other component connected directly or indirectly to one of the attached networks.

Specifically, in the invention, a spot market system may reside either on server 102 or computers 104-110. The computer hosting the spot marketplace accesses a supplier database with information about a plurality of groups of potential bidders/suppliers, wherein each of the groups of potential bidders is associated with purchasing requests directed to a particular good or service.

The spot market system is a web-based application that is implemented on a computer network, such as the Internet, thus creating a spot marketplace on the Internet. In a preferred embodiment, when there is a spot need that requires immediate response from multiple suppliers, the expeditor posts information about the spot need on the spot marketplace. For example, if there is a transportation request that requires a carrier to immediately deliver products in a transportation load, the expeditor posts information about the transportation load on the spot marketplace. Suppliers using computers connected to the computer network may access the information on the spot marketplace. Fig. 3 illustrates a web page that the expeditor uses to post the load information on the spot market.

The spot market system automatically selects a plurality of suppliers that are capable of fulfilling the transportation request by querying the supplier database with information from the transportation request. The supplier database includes records identifying suppliers capable of supplying a plurality of different goods and services to the spot marketplace. For each supplier represented in the supplier database, a record is stored in the supplier database, which includes information representing the capabilities of the supplier to deliver at least one good or service. The system then automatically

invites the suppliers selected from the supplier database to bid on the spot need by sending an electronic notification to each of the selected suppliers.

In accordance with a preferred embodiment, the supplier database also stores information about each supplier such as, for example, geographic areas where a given supplier may be capable of delivering given goods or services, as well as historical performance of the supplier in connection with one or more prior on-line solicitations for bids. The historical performance information may include, for example, the bidding pattern of a supplier during one or more prior solicitations, as well as the historical ability of the supplier to deliver particular goods or services following previous requests where the supplier was the winning bidder. In this embodiment, the spot request from the expeditor may further include information identifying a geographic location associated with the goods or services being procured. When such geographic information is included with the request, the system may automatically select the suppliers by querying the supplier database using both the type and geographic location information from the request.

Since the present invention is directed to meeting spot needs of buyers, the process of automatically selecting suppliers for solicitation, automatically inviting the suppliers to bid and selecting a winning bidder are preferably completed either on the same business day that the request for procurement is received, or within predetermined hours of receipt of the request.

Only suppliers that are automatically selected by the system are allowed to bid in the spot need. Preferable, the electronic notification is an e-mail message from the

expeditor to the pre-selected suppliers. However, other notification means, such as personal digital assistants and pagers, may be used. The notification includes a time for the suppliers to post a bid and a deadline when all bids must be posted. Fig. 4 illustrates an e-mail message from the expeditor to the suppliers inviting the suppliers to participate in the spot marketplace.

Thereafter, at a predetermined time, the suppliers go to the spot marketplace and post sealed bids before the deadline. In a preferred embodiment, suppliers who wish to bid must do so before the stated deadline and no bids are accepted after the deadline. When each supplier posts a bid, the bid is sealed and other suppliers are not allowed to see any information about the bid. In an alternate embodiment, the suppliers may posts partially open bids. After posting a first bid, the supplier is allowed to revise the bid until the deadline. It should be noted that suppliers will not be allowed to revise their bids after the deadline. All bids are valid for the day of the request until a winning supplier is awarded the bid and notified of the award. After the winning bid is awarded, all other suppliers are also notified about their status. Fig. 5 illustrates a web page in the spot marketplace where the pre-selected suppliers place bids or decline to bid. After the deadline, the expeditor reviews all bids and makes an award. Fig. 6 illustrates a web page in the spot marketplace where the expeditor reviews the bids and makes an award to a winning supplier. The expeditor sends a second notification to all suppliers and informs the winning supplier of the award. Fig. 7 illustrates an e-mail message from the expeditor to the winning supplier. The winning supplier confirms the award by visiting a

web page in spot marketplace. Fig. 8 illustrates a web page in the spot marketplace where the winning supplier confirms the award.

Since the spot market is a portal that is accessible through an on-line marketplace, the provider of the on-line marketplace is able to offer multiple products for servicing various clients' needs from one location. It also enables clients of the on-line marketplace to conduct business for themselves without paying for full services of a market making team.

Fig. 9 illustrates steps implemented in the inventive system. In Step 9010, the buyer enters a request to procure goods or services that are required to satisfy the spot need of the buyer into the spot market system. In Step 9020, the system automatically selects potential bidders in response to the good or service identified in the buyer's request by querying the supplier database. In Step 9030, the system electronically notifies each of the potential bidders in the selected group of an opportunity to submit a bid to satisfy all or part of the buyer's purchase request. In Step 9040, the system electronically accepts bids from each of the potential bidders in the selected group. In Step 9050, the system selects a winning bidder in accordance with the received bids.

The foregoing description has been directed to specific embodiments of this invention. It will be apparent, however, that other variations and modifications may be made to the described embodiments, with the attainment of some or all of their advantages. Therefore, it is the object of the appended claims to cover all such variations and modifications as come within the true spirit and scope of the invention.